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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HUG, ERIC J

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 02/27/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/965,435

Applicant(s)

BECK, DAVID A.

Examiner

Eric Hug

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 and 24 is/are allowed.
- 6) ☒ Claim(s) 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

*Response to Amendment*

The following is in response to the amendment filed on December 16, 2002.

*Claim Rejections - 35 USC § 102*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Schiel (CA 912881). Schiel discloses a washing press for a paper machine felt comprising a pair of pressure rollers which squeezes out washing fluid which has been applied to the felt. The devices comprises the elements of the claim, namely a source of washing fluid, a means for applying the washing fluid, and a press for flushing out the fluid.

A papermaking felt can be considered a semi-permeable membrane as it structured to allow fluid to pass through from a fibrous web. Applicant offers no structural difference between a felt and semi-permeable membrane other than to say that a semi-permeable membrane has lower air-permeability. Therefore, the phrase "for cleaning a semipermeable membrane" in claim 23 constitutes a statement of intended use of the apparatus. Since the apparatus of Schiel comprises all the claimed features (a cleaning (washing) fluid and a press for squeezing out the cleaning fluid) and performs the same function as the claimed apparatus (cleaning a membrane), then Schiel reads on the present invention according to claim 23. The fact that Applicant defines the membrane as being semi-permeable does not change the structure of the cleaning apparatus nor its function.

2. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Bustin et al (US 2,775,170). Bustin discloses a means of cleaning a press wire screen which is used during the pressing of lignocellulose hardboards. The wire screen is cleaned during operation. An alkaline detergent is applied prior to admission of the wire and the supported wet lap hardboard into the press. Upon application of heat and pressure, the cleaning fluid is expelled through the wire screen, thus removing any occluded material built thereon.

The phrase "for cleaning a semipermeable membrane" in claim 23 constitutes a statement of intended use of the apparatus. Since the apparatus of Bustin comprises all the claimed features (a detergent and a press for squeezing out the detergent) and performs the same function as the claimed apparatus (cleaning a membrane), then Bustin reads on the present invention according to claim 23.

3. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by prior art devices cited by Walker (US 1,468,057). Walker discloses an improved method for cleaning a traveling paper machine felt by providing a cleaning fluid to the felt followed by application of suction to remove the cleaning fluid from the felt. Walker discloses the invention as an improvement over known prior art devices. These prior art devices comprise a source of cleaning fluid directed onto the felt and a pair of squeezing rolls or kneading rolls between which the felt passes and where cleaning fluid is expelled from the felt (see first page, second column, lines 70-90). Therefore, the prior art devices cited by Walker read on the elements of the claim.

The phrase "for cleaning a semipermeable membrane" in claim 23 constitutes a statement of intended use of the apparatus. Since Walker discloses devices comprising the claimed features (a cleaning fluid and a squeezing press) which perform the same function as the claimed apparatus (cleaning a membrane), then the prior art devices of Walker read on the present invention according to claim 23.

***Allowable Subject Matter***

Claims 1-22 and 24 are allowed.

Claims 1-6 and 8-12 are allowed, because the prior art does not disclose a method for cleaning a semi-permeable membrane configured for carrying a fiber web, whereby the method comprises applying a cleaning fluid on the semi-permeable membrane, providing an air press configured for conveying the membrane therethrough and for removing water from the fiber web carried upon the membrane, and subjecting the membrane to pressurized air to flush the cleaning fluid through the membrane.

Claims 17-19 and 21 are allowed, because the prior art does not disclose or suggest an apparatus for cleaning a semi-permeable membrane configured for carrying a fiber web, whereby the apparatus comprises a source of cleaning fluid, an applicator for applying cleaning fluid to the semi-permeable membrane, and an air press having pressurized air therein, configured for carrying the membrane and for flushing cleaning fluid through the membrane.

Claims 7, 13-16, 20, 22, and 24 are allowed, because the prior art also does not disclose or suggest a method or apparatus for cleaning a semi-permeable membrane configured for carrying a fiber web comprising a cleaning fluid and an air press, whereby the air press includes

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a cap roll upon which the cleaning fluid is applied and transferred to the membrane (claims 7, and 20), or whereby the press is configured for impregnating or coating the fiber web carried by the membrane (claim 13), or whereby a second air press is provided (claims 14-16 and 22), or whereby the air press is a sub-combination of a papermaking machine (claim 24).

The prior art does not teach using an air press for cleaning a semi-permeable membrane carrying a fiber web and carrying the membrane therethrough. Similarly, the prior art does not disclose an apparatus comprising an air press and a source of cleaning fluid for cleaning a permeable material passing therethrough (see Response to Arguments below).

### ***Response to Arguments***

With respect to Applicant's arguments filed December 16, 2002 and after reconsideration of the prior art of record, it has been determined that the prior art references cited in the previous Office action do not explicitly disclose a semi-permeable membrane as described by Applicant in the specification, thus do not teach methods of cleaning a semi-permeable membrane. It is understood that the semi-permeable membrane claimed by the Applicant refers to a membrane having low air permeability and distinguished from papermaking press felts, forming wires, or drying fabrics having substantial air and fluid permeability.

Lindsay et al (US 6,280,573) utilizes an air press for pressure dewatering of a moving web, either alone or in combination with one or more supporting fabrics. Koskinen et al (US 6,136,148) discloses a means for cleaning a drying fabric in a paper machine by spreading a cleaning liquid over the fabric and blowing air through the fabric to expel water. Gardiner (US 4,116,762) discloses a foraminous conditioning roll for supplying pressurized air to the inside

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surface of a belt which is in contact with the roll. Sando (US 4,437,200) discloses a pressurized air chamber for dehydrating a wet cloth soaked with treating fluid. Ishiwata et al (US 3,956,790) discloses using high velocity air jets to removed dust from a running paper or plastic web. None of these references specifically disclose the permeability of the materials being treated, thus one cannot assume that these materials are semi-permeable as defined by the present invention. Only in Gardiner is the fabric configured for carrying a fiber web, but not during the process of cleaning the fabric. Only Koskinen and Sando disclose pressurized air chambers *per se*, but not in combination with cleaning a semi-permeable membrane carrying a fiber web. The other references utilize pressurized air sources directed onto the web materials, rather than using a pressurized air chamber for cleaning a semi-permeable membrane.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 703 308-1980. The examiner can normally be reached on Monday through Friday, 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0651.



jeh  
February 19, 2003

  
STEVEN P. GRIFFIN  
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